

Plex 5/22/2018 8:30 AM Dart Dubois Pascal



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tei (613) 632-5200

PURCHASE ORDER PO039829

Supplier:	THY001-VC Thyssenkrupp Materials CA Ltd O/A VPK Metal- c/o T27540 PO Box 4275, Postal "A" Toronto ON M5W 5V8 Canada Phone: 905 669 9444 Fax: 905 738 9033	PO No: PO039829 PO Date: 5/8/18 Due Date: 5/22/18 Purchase Order Revision: Revision Date: Ship-To Contact: Lavoie, Chantal Phone: clavoie@dartaero.com
Ship To:	1270 Aberdeen Street Hawkesbury ON K6A 1K7 Canada Phone: 613-632-5200	Via: Ground Pymt Terms: Net 30 Freight Terms: Special Comments: quote no. 1203109433

Items

Line Item	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	MT-BRONZE-C63000-R2.500	1 ft lenght	Bronze C63000 Round Bar 2.500" : MAT'L AS PER BRONZE C63000 AS PER AMS 4640 OR ASME SB150 OR ASTM B150 OR SAE J461 OR SAE J463	Firmed	5/22/18	2 ft	0 ft	2 ft	\$172.50/ft	\$345.00 DAS 11 9-89
2	M17-4-B0.500X2.000		17-4 SS Bar .500 x 2.00 : MATERIAL: 17-4 PH SS BAR AS PER AMS 5604/5643 GRAIN MUST BE ALONG LENGTH OF BAR MIN. YIELD TENSILE STRENGTH = 100 KSI MIN. ULTIMATE TENSILE STRENGTH = 150 KSI receive ft	Firmed	5/22/18	12 ft	0 ft	12 ft	\$19.32/ft	\$231.84
3	M304R0.625		304 SS Round bar 0.625 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Firmed	5/11/18	12 ft	0 ft	12 ft	\$7.08333/ft	\$85.00

MAY 22 2018

Items										
Line Item	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
4	M6061T6R7.000		6061-T6 Round Bar 7.000" (CUT TO SIZE: 7.125") : MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ- AA-200/8 OR AMS-QQ-A- 200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Firmed	5/22/18	2.969 ft	0 ft	3 ft	\$148.21052/ft	\$440.04

Line Item Note note: cut to 7.125" x 5 pcs = 2.96875 ft

Grand Total: \$1,101.88

Order Notes

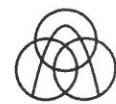
Procurement Quality Clauses
 A005 right of entry
 A012 chemical and physical test report
 A016 personnel qualification
 A017 raw material identification (as applicable)
 A026 certification of material conformance
 A041 quality management system
 A042 part notification by supplier
 A043 retention of quality documents
 A048 counterfeit parts avoidance, detection, mitigation and disposition program
 A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.darateamspace.com for further explanation.

Plex 5/8/18 11:44 AM dart.lavoie.chantal

ARR

thyssenkrupp Materials NA, 4700 chemin du Bois-Franc, Saint-Laurent, QC H4S 1A7



thyssenkrupp

DELIVERY NOTE

DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY ON K6A 1K7

IBAR

MTR



DATE: 05/22/2018
DOC. NO: 2405966158*
BOL. NO: 2405966158
ORDER NO: 1403639010
YOUR P/O: PO039829
CUSTOMER NO: 10058125
Route: 303UA
CONTACT: Lucy Truglio
TEL:
FAX:
EMAIL: lucy.truglio@thyssenkrupp.co
m

**MILL TEST REPORTS, PACKING SLIPS ARE TO SENT
WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR
TO SHIPPING.**

ATTN: CHANTAL/LINDA

**** ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER ****

**** REFERENCED ON IT ****

Deliveries are carried out for your account and risk acc. to our Gen. Terms & Cond. of Delivery and Payment.

ITEM	DESCRIPTION	NET QTY1 / QTY2	PACKAG
0010	AMS4640, ASTM B150	1008612692	
	CURD00449	1 PC	
	Aluminum Bronze C63000 HR50 (drawn & stress relieved) Round		
	2.5000 (+-.005) X 24 " RBW Cutting - Standard +.125		
	Cut To Length		
	24.0000 "		
	Actual Chemistry/Act. Physical		
	Standard Packaging		
	MATERIAL ORIGIN: UK OR FRANCE		
	AMS4640, ASTM B150		
	TAGNUM QTY	PCS --- COM	
	1013850427 1	1	
	UOMVEND PC LEBRONZE		
	VENDPO 5400358448		
	HLOT 603275		
	SAE AMS 4640 H;ROHS COMPLIANT;ASTM B 150/B 150M 2012		
	Total Gross Weight	31.348 lb	

All items, not declared as partial delivery, are final quantities.
Delivery Terms: PPD gem. Incoterms 2000 Prepaid PREPAID

thyssenkrupp Materials NA, 4700 chemin du Bois-Franc, Saint-Laurent, QC H4S 1A7

DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY ON K6A 1K7

DELIVERY NOTE

DATE:	05/22/2018
DOC. NO:	2405966158*
BOL. NO:	2405966158
ORDER NO:	1403639010
YOUR P/O:	PO039829
CUSTOMER NO:	10058125
Route:	303UA
CONTACT:	Lucy Truglio
TEL:	
FAX:	
EMAIL:	lucy.truglio@thyssenkrupp.com

CERTIFICAT DE CONFORMITÉ/CERTIFICATE OF COMPLIANCE

* thyssenkrupp Matériaux NA certifie que le matériel décrit ci-dessus est conforme aux dessins ou spécifications exigés sur le bon de commande et qui sont en vigueur à la date ou la commande a été acceptée./ thyssenkrupp Materials NA certifies that the material described above is in accordance with the drawings or specifications called for on said order that are current on the date order was accepted.
 * Nous certifions que le document reproduit ici est une copie conforme du rapport fourni par le fournisseur du matériel où les données résultent de l'analyse faite par un laboratoire qualifié/ We certify that the document reproduced here is true to the report provided by the equipment supplier where the data are the result of analysis by a qualified laboratory.

David Nuordine - Director of Quality Assurance



INSPECTION CERTIFICATE
EN 10204 3.1
Number 0000409217/000
Page 1/2
Lot n° 1707708397

Printed 25/09/17

Purchaser
THYSSENKRUPP MATERIALS NA
PO Box 5116
MI 408086-5116 SOUTHFIELD USA

Delivery address
THYSSENKRUPP MATERIALS NA
CBS NORTHWOOD
8001 THYSSENKRUPP PARKWAY
NORTHWOOD
OH

Y/Ord 5400358448-R05/CURD00449
C/Ord 1632702/006 of 12/07/17
BI Reference 2,500" X 144" M/L ROUND BAR
S63000-HR50-FIXLG-63,50 * 0,000 LG:2 / 3.658,
BARRE RONDE NC4

Y/Ord date 12/07/17
Delivery n° 3633405/0190549.11/COCBSN
Deliv. date 31/07/17

Standard ASTMB150/ASME SB150/AMS4640/QQC465
Alloy UNS C63000
Condition HR50 FIXED LENGTHS
Ordered qty 5467,316 LB Delivered qty 2008,810 LB Net weight 912,000 KG

Chemical analysis - if Cu not mentionned: balance

Component.	Cu+Ag	Cu	Al	Ni+Co	Ni	Fe	Mn	Zn	Si
Minimum...	77,25	77,25	9,0	4,0	4,0	2,0			
Maximum...	85,00	85,00	11,0	5,5	5,5	4,0	1,50	0,300	0,25
Record -1-	80,44	80,44	10,4	4,6	4,6	3,6	0,66	0,100	0,07
<hr/>									
Component.	Sn								
Minimum...		%							
Maximum...	0,200								
Record -1-	0,001								

Mechanical tests

Test	Tensile strength	Elongation 4D	Hardness Brinell 30D2	Yield strength 0,5%
Index				
Unit	ksi	%	HB	ksi
Minimum	105,0	10,0	187,0	55,0
Maximum			241,0	
Test -1-	116,5	12,4	222,0	60,1

Other tests

HEAT Number : 603275

Visual

Dimensional

Mercurous Nitrate Test

Ultrasonic

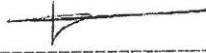
ASTMB154

MIL2154/A

Properties conform

ASTMB150/B150M (03) (08) (12) (HR50)

Validated by Jean philippe GONNET
 Quality control inspector
 Validated with electronic signature



Siège social : ZI Voie de Châlons - RD 977 - 51800 Salernes - France - Tel +33 (0)3 26 69 28 28 - Fax +33 (0)3 26 70 16 82 - www.lebronze-alloys.com
 SAS au capital de 12.457.353 Euros - RCS Châlons en Champagne 572 196 129 - TVA UE FR60 572 196 129

From: TK Materials CA, Ltd.

Cust. DART AEROSPACE LTD

CstAr

Wgt.: 31.348 LB

Del.: 2405966158

CstOr PO039829

Date 05/16/2018



Uba
lebronze alloys

INSPECTION CERTIFICATE
EN 10204 3.1
Number 0000409217/000
Page 2 / 2
Lot n° 1707708397

Printed 25/09/17

Purchaser THYSSENKRUPP MATERIALS NA
PO Box 5116

Delivery address THYSSENKRUPP MATERIALS NA
CBS NORTHWOOD
8001 THYSSENKRUPP PARKWAY
NORTHWOOD
OH

MI 408086-5116 SOUTHFIELD USA

Y/Ord 5400358448-R05/CURD00449 Y/Ord date 12/07/17
O/Ord 1632702/006 of 12/07/17 Delivery n° 3633405/0190549.11/COCBSN
Deliv. date 31/07/17

SI Reference 2,500" X 144" M/L ROUND BAR
C63000-HR50-FIXLG-63,50 * 0,000 LG:2 / 3.658,
BARRE RONDE NC4

Standard ASTM B150/AMS B150/AMS 4640/QQC465
Alloy UNS C63000
Condition HR50 FIXED LENGTHS

Ordered qty	5467,316 LB	Delivered qty	2008,810 LB	Net weight	912,000 KG
	ASME B150 (06) (HR50)				
	AMS 4640 G (05) / AMS 4640 H (11)				
	QQC465B AMD 1 (83)				

Chemical composition conforms to ASTM B124/B124M (12)
Ultrasonic test in accordance with mil2154 / AMS2154 (2005)
class A and ASTM E2375-08 class A
Mercurous Nitrate test in accordance with ASTM B154 : ok

This material did not come in direct contact with mercury or
any of its compounds during its manufacturing, inspection or
storage.

Melted and manufacturing in FRANCE.

Chemical analysis and mechanical properties in conformity
with EN12163 / CW307G / R680 or M and ASTM B124

No weld repair was performed on this material
The results of the other tests and the frequency are
conformable with the norm in reference. This material
has been manufactured and tested in accordance with
the listed specifications and results conform to
the specification and order requirements.

LEBRONZE ALLOYS
SIEGE SOCIAL-ZI VOIE DE CHALONS-RD 977-51600 SUIPPES-FRANCE
TEL:+33(0)3 26 69 28 28 www.lebronze-alloys.com
RCS Chalons en Champagne 572 196 129 - TVA UE FR60 572 196

| Validated by Jean philippe GONNET
| Quality control inspector
| Validated with electronic signature



Siège social : ZI Voie de Châlons - RD 977 - 51600 Suippes - France - Tel +33 (0)3 26 69 28 28 - Fax +33 (0)3 26 70 16 82 - www.lebronze-alloys.com
SAS au capital de 12.457.353 Euros - RCS Châlons en Champagne 572 196 129 - TVA UE FR60 572 196 129

From: TK Materials CA, Ltd.

Cust. DART AEROSPACE LTD

Del.: 2405966158

CstAr

CstOr PO039829

Wgt.: 31.348 LB

Date 05/16/2018



MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-Bronze-C63000-R2.500 PO / BATCH NO.: 039829/5072875
 DATE: MAY 22 2018

MATERIAL CERT REC'D: YES
 QUANTITY RECEIVED: 2
 QUANTITY INSPECTED: 2
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.500
 THICKNESS RECEIVED: 2.500
 SHEET SIZE ORDERED: NA
 SHEET SIZE RECEIVED: NA

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT FINISH	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORROSION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="radio"/> N <input type="radio"/>	<i>ASTm B150</i>
CORRECT THICKNESS	Y <input checked="" type="radio"/> N <input type="radio"/>	
PHOTO REQUIRED	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="radio"/> N <input type="radio"/>	<i>Heat # 603225</i>
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="radio"/> N <input type="radio"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="radio"/> N <input type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="radio"/> N <input type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>DAS</u> <u>11</u>	<u>MAY 22 2018</u>	SIGNED OFF BY: _____	
DATE: <u>9-89</u>		DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL:

SPECIFICATION:

PART NUMBER:

BRONZE C63000

AMS 4640 OR ASME SB150 OR ASTM B150 OR SAE J461 OR SAE J463

MT-BRONZE-C63000-R-[D.DDD]

WHERE D.DDD IS DIAMETER IN INCHES

EXAMPLE:

1/4" ROUND BRONZE C63000 = MT-BRONZE-C63000-R-0.250

REV.	REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED
A		NEW ISSUE	17-787	17.12.12	VM	ML

D

C

B

A

DART		Aerospace, Mississauga, Ontario, Canada	
TITLE: BRONZE C63000 ROUND BAR			
PART NO. MT-BRONZE-C63000-R REV. A			
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED, A TOLERANCE OF ±.010" IS APPLIED TO ALL OUTER DIMENSIONS AND ±.005" TO ALL INNER DIMENSIONS.			
INITIALS AND DATE:	VM 7/17/2012	INITIALS AND DATE:	VM 7/17/2012
DESIGNED BY:	VM	CHECKED BY:	VM
DRAWN BY:	VM 7/17/2017	APPROVED BY:	VM 7/17/2017
MAILED BY:	ML 12/17/2017	DATE:	ML 12/17/2017
INFO REVIEW BY:	DP 12/17/2017	SCALE:	INTS
APPROVED BY:	ML 12/17/2017	SHEET 1 OF 1	
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